

Amended Claims (Attorney Docket No. LeA 36 902)

1. (Currently amended) A method of screening for therapeutic agents useful in the treatment of a disease ~~comprised in a group of diseases consisting of selected from~~ cardiovascular diseases, dermatological diseases, gastroenterological diseases, cancer, hematological diseases, respiratory diseases, inflammation, neurological diseases and urological diseases, in a mammal comprising the steps of
 - i) contacting a test compound with a AdipoR2 polypeptide,
 - ii) detecting binding of said test compound to said AdipoR2 polypeptide.
2. (Currently amended) A method of screening for therapeutic agents useful in the treatment of a disease ~~comprised in a group of diseases consisting of selected from~~ cardiovascular diseases, dermatological diseases, gastroenterological diseases, cancer, hematological diseases, respiratory diseases, inflammation, neurological diseases and urological diseases, in a mammal comprising the steps of
 - i) determining the activity of a AdipoR2 polypeptide at a certain concentration of a test compound or in the absence of said test compound,
 - ii) determining the activity of said polypeptide at a different concentration of said test compound.
3. (Currently amended) A method of screening for therapeutic agents useful in the treatment of a disease ~~comprised in a group of diseases consisting of selected from~~ cardiovascular diseases, dermatological diseases, gastroenterological diseases, cancer, hematological diseases, inflammation respiratory diseases, inflammation, neurological diseases and urological diseases, in a mammal comprising the steps of
 - i) determining the activity of a AdipoR2 polypeptide at a certain concentration of a test compound,
 - ii) determining the activity of a AdipoR2 polypeptide at the presence of a compound known to be a regulator of a AdipoR2 polypeptide.

4. (Currently amended) The method of ~~any of claims~~ claim 1 to 3, wherein the step of contacting is in or at the surface of a cell.
5. (Currently amended) The method of ~~any of claims~~ claim 1 to 3, wherein the cell is in vitro.
6. (Currently amended) The method of ~~any of claims~~ claim 1 to 3, wherein the step of contacting is in a cell-free system.
7. (Currently amended) The method of ~~any of claims~~ claim 1 to 3, wherein the polypeptide is coupled to a detectable label.
8. (Currently amended) The method of ~~any of claims~~ claim 1 to 3, wherein the compound is coupled to a detectable label.
9. (Currently amended) The method of ~~any of claims~~ claim 1 to 3, wherein the test compound displaces a ligand which is first bound to the polypeptide.
10. (Currently amended) The method of ~~any of claims~~ claim 1 to 3, wherein the polypeptide is attached to a solid support.
11. (Currently amended) The method of ~~any of claims~~ claim 1 to 3, wherein the compound is attached to a solid support.
12. (Currently amended) A method of screening for therapeutic agents useful in the treatment of a disease ~~comprised in a group of diseases consisting of~~ selected from cardiovascular diseases, dermatological diseases, gastroenterological diseases, cancer, hematological diseases, respiratory diseases, inflammation, neurological diseases and urological diseases, in a mammal comprising the steps of
 - i) contacting a test compound with a AdipoR2 polynucleotide,
 - ii) detecting binding of said test compound to said AdipoR2 polynucleotide.

13. (Original) The method of claim 12 wherein the nucleic acid molecule is RNA.
14. (Original) The method of claim 12 wherein the contacting step is in or at the surface of a cell.
15. (Original) The method of claim 12 wherein the contacting step is in a cell-free system.
16. (Original) The method of claim 12 wherein polynucleotide is coupled to a detectable label.
17. (Original) The method of claim 12 wherein the test compound is coupled to a detectable label.
18. (Currently amended) A method of diagnosing a disease ~~comprised in a group of diseases consisting of selected from~~ cardiovascular diseases, dermatological diseases, gastroenterological diseases, cancer, hematological diseases, respiratory diseases, inflammation, neurological diseases and urological diseases, in a mammal comprising the steps of
 - i) determining the amount of a AdipoR2 polynucleotide in a sample taken from said mammal,
 - ii) determining the amount of AdipoR2 polynucleotide in healthy and/or diseased mammals.
19. (Currently amended) A pharmaceutical composition for the treatment of a disease ~~comprised in a group of diseases consisting of selected from~~ cardiovascular diseases, dermatological diseases, gastroenterological diseases, cancer, hematological diseases, respiratory diseases, inflammation, neurological diseases and urological diseases, in a mammal comprising a therapeutic agent which binds to a AdipoR2 polypeptide.
20. (Currently amended) A pharmaceutical composition for the treatment of a disease ~~comprised in a group of diseases consisting of selected from~~ cardiovascular diseases, dermatological diseases, gastroenterological diseases, cancer, hematological diseases, respiratory diseases, inflammation, neurological diseases and urological diseases, in a mammal comprising a therapeutic agent which regulates the activity of a AdipoR2 polypeptide.
21. (Currently amended) A pharmaceutical composition for the treatment of a disease ~~comprised in a group of diseases consisting of selected from~~ cardiovascular diseases, dermatological

diseases, gastroenterological diseases, cancer, hematological diseases, respiratory diseases, inflammation, neurological diseases and urological diseases, in a mammal comprising a therapeutic agent which regulates the activity of a AdipoR2 polypeptide, wherein said therapeutic agent is

- i) a small molecule,
- ii) an RNA molecule,
- iii) an antisense oligonucleotide,
- iv) a polypeptide,
- v) an antibody, or
- vi) a ribozyme.

22. (Currently amended) A pharmaceutical composition for the treatment of a disease ~~comprised in a group of diseases consisting of selected from~~ cardiovascular diseases, dermatological diseases, gastroenterological diseases, cancer, hematological diseases, respiratory diseases, inflammation, neurological diseases and urological diseases, in a mammal comprising a AdipoR2 polynucleotide.
23. (Currently amended) A pharmaceutical composition for the treatment of a disease ~~comprised in a group of diseases consisting of selected from~~ cardiovascular diseases, dermatological diseases, gastroenterological diseases, cancer, hematological diseases, respiratory diseases, inflammation, neurological diseases and urological diseases, in a mammal comprising a AdipoR2 polypeptide.
24. (Currently amended) ~~Use of regulators of a AdipoR2 for the preparation of a pharmaceutical composition A method for the treatment of a disease comprised in a group of diseases consisting of selected from~~ cardiovascular diseases, dermatological diseases, gastroenterological diseases, cancer, hematological diseases, respiratory diseases, inflammation, neurological diseases and urological diseases, in a mammal comprising administering to a mammal an effective amount of a regulator of AdipoR2.
25. (Currently amended) Method for the preparation of a pharmaceutical composition useful for the treatment of a disease ~~comprised in a group of diseases consisting of selected from~~

cardiovascular diseases, dermatological diseases, gastroenterological diseases, cancer, hematological diseases, respiratory diseases, inflammation, neurological diseases and urological diseases, in a mammal comprising the steps of

- i) identifying a regulator of AdipoR2,
- ii) determining whether said regulator ameliorates the symptoms of a disease ~~comprised in a group of diseases consisting of selected from~~ cardiovascular diseases, dermatological diseases, gastroenterological diseases, cancer, hematological diseases, respiratory diseases, inflammation, neurological diseases and urological diseases, in a mammal; and
- iii) combining of said regulator with an acceptable pharmaceutical carrier.

26. (Currently amended) ~~Use of a regulator of AdipoR2 A method~~ for the regulation of AdipoR2 activity in a mammal having a disease ~~comprised in a group of diseases consisting of selected from~~ cardiovascular diseases, dermatological diseases, gastroenterological diseases, cancer, hematological diseases, respiratory diseases, inflammation, neurological diseases and urological diseases, ~~comprising administering to a mammal an effective amount of a regulator of AdipoR2.~~